Highland Park School District
EDU2011 Application

1.   The nature of the Applicant Wireless Program, including the extent to which the use of connectivity is interactive and utilizes the Internet:

a.   Credit Recovery and High School Graduation Program

The School District of Highland Park Michigan runs the most effective Alternative High School Graduation program in South East Michigan. The program allows students to complete their High School Course work either at school or over the Internet. This wireless connectivity project will expand the effectiveness of the program by providing city wide wireless Internet access for all of Highland Park Michigan.

b.   How long has the Highland Park Alternative High School Graduation Program been in operation? Applicant Wireless Program has been in operation and the mobile wireless device(s) being used,

- The program was started in the 2008-2009 School year
- Wireless cellular access has been available since program inception

A variety of wireless devices are used and supported:

1. Laptops
2. Net Books
3. Tablet Computers
4. Smart Phones
5. Desktop computers in school

c.   Technical issues associated with implementing the Applicant Wireless Program, including an analysis of any problems with the availability of wireless access to students or patrons off the school premises and how those issues are being or will be addressed by the school.

Technical Issues:

- Network Reliability

- Network Performance

- Network Scale

- Network Access

- Network Reliability will be addressed by building out the network with military grade components

- Network Performance will be addressed by using triple radio access points running at 10Mb/sec

- Network Scale is addressed by adopting a ""switch stack architecture" used in successful military applications

- Network Access is addressed by deploying enough access points to assure coverage with no blind spots in the targeted area in and around Highland Park Michigan.

d.   Training

- Teachers are fully trained on credit recovery and how to access system from school, home or wireless.

- students are fully trained on credit recovery and how to access system from school, home or wireless.

- parents will have access to GED training and have a training session on access from home or wireless access.

e.   Non-profit Partners:

Public communications re:

the Focus: HOPE Broadband Initiative

Detroit Connected Community Initiative (DCCI)
The Detroit Connected Community Initiative (DCCI) is the general term used to describe the program efforts involving the personnel, resources and facilities of four major Detroit-based non-profit organizations and the funding assistance of two major grants and to ENGAGE, TRAIN, EQUIP and SUPPORT new Internet Broadband users within three selected communities within the city of Detroit that are presently un-served or underserved regarding Internet broadband (i.e., high-speed Internet) access). These new Internet users will be called **broadband adopters**.

Detroit DCCI: a partner city of the OneCommunity "Connect Your Community" (CYC)

DCCI Key Partners
The key partners of the DCCI are these Detroit organizations:
> **Focus: HOPE**
> **4C / Family Place** (4C = Child Care Coordinating Council of Detroit/Wayne County)
> **Matrix Family Services**
> **Community Telecommunications Network (CTN)**

2.   Poverty level based on the percentage of students eligible for a free or reduced-price lunch under the national school lunch program (NSLP)

- 85% of students participate in free or reduced lunch

3.   Financial need of the Highland Park School District

In June 2001, because of the city's mounting fiscal crisis, the State of Michigan appointed an emergency financial manager to supervise the City's financial affairs. Highland Park has been in financial distress since its major tax payer Chrysler corporation relocated in 1992.

4.   Costs, including those eligible for E-rate support and those not eligible for E-rate support, associated with implementing the Applicant Wireless Program, including but not limited to costs for equipment such as e-readers or laptops, access and connection charges, teacher training, librarian training, or student/parent training;

Description	Quantity	Price	Total
Triple Radio Access Point	250	$4,500.00	$1,125,000.00
Installation	250	$500.00	$125,000.00
Network Operations Center	1	$250,000.00	$250,000.00
Total			$1,500,000.00

5.   Committed school or library resources available to implement the entire Applicant Wireless Program, including whether those funds are from the school or library's general budget or from an outside funding source;

- Wayne State University i3 Grant of $150,000 is available to district to pay for student devices

6.   EDU2011 Project Effect:

Highland Park City wide coverage will spur enrollment in the alternative education program and spur economic development in Highland Park Michigan.

7.　　an analysis of the cost-effectiveness of the current or planned Applicant Wireless Program as compared to the use of other types of technology that would also meet the Program's objectives.

Technology	Cost-effectiveness	Impact on Program
Dial Up	Cheap	Not effective (too slow)
Broadband Cable	Too Expensive	Not within students budget
WiMax	Too Expensive	Not Practical at this time
Cellular Phone	Too Expensive	Not Practical at this time
Cellular Mesh EDU2011	Affordable	Perfect for program

8.　　Relevant technology planning documents and, if applicable, a statement of long-term objectives for the Program:

- The long term goals of the program will be to partner with other school districts in area to provide coverage for student access across Wayne County Michigan
- See attached Focus Hope and One Community Plans

9.　　Child Internet Compliance:

The System will be managed and controlled by a CIPA compliant Internet Filter and Proxy system.

10..　　Acceptable Use Policies:

Highland Park School District
Internet Acceptable Use Agreement

(Please read this document carefully before signing.)

Internet access is now available to students and teachers in the Highland Park School District.

We are very pleased to bring this access to Highland Park School District and believe the Internet offers vast, diverse, and unique resources to both students and teachers. Our goal in providing this service to teachers andstudents is to promote educational excellence in schools by facilitating resource sharing, innovation, and communication.

The Internet is an electronic highway connecting thousands of computers all over the world and millions of individual subscribers. Students and teachers have access to:

1) Electronic mail (e-mail) communication with people all over the world.

2) Information and news from NASA as well as the opportunity to correspond with the scientists at NASA and other research institutions.

3) Public domain software and graphics of all types for school use.

4) Discussion groups on a plethora of topics ranging from Chinese culture to the environment to music to politics

5) Access to many University Library Catalogs, the Library of Congress, and ERIC, a large collection of relevant information to educators and students.

6) Graphical access to the World Wide Web, the newest and most exciting access tool on the Internet.

With access to computers and people all over the world also comes the availability of material that may not be considered to be of educational value in the context of the school setting. Highland Park School District has taken precautions to restrict access to controversial materials. However, on a global network it is impossible to control all materials and an industrious user may discover controversial information. We (Highland Park School District) firmly believe that the valuable information and interaction available on this worldwide network far out weighs the possibility that users may procure material that is not consistent with the educational goals of the District.

Internet access is coordinated through a complex association of government agencies, and regional and state networks. In addition, the smooth operation of the network relies upon the proper conduct of the end users who must adhere to strict guidelines. These guidelines are provided here so that you are aware of the responsibilities you are about to acquire. In general this requires efficient, ethical and legal utilization of the network resources. If an Highland Park School District user violates any of these provisions, his or her account will be terminated and future access could possibly be denied.

The signature(s) at the end of this document is (are) legally binding and indicates the party (parties) who signed has (have) read the terms and conditions carefully and understand(s) their significance.

Internet--Terms and Conditions of Use

1) **Acceptable Use** - The purpose of the backbone networks making up the Internet is to support research and education in and among academic institutions by providing access to unique resources and the opportunity for collaborative work. The use of your account must be in support of education and research and consistent with the educational objectives of the Highland Park School District. Use of other organization's network or computing resources must comply with the rules appropriate for that network. Transmission of any material in violation of any national or state regulation is prohibited. This includes, but is not limited to: copyrighted material, threatening or obscene material, or material protected by trade secret

2) **Privileges** - The use of the Internet is a privilege, not a right, and inappropriate use will result in a cancellation of those privileges. (Each student or teacher who receives an account will be part of a discussion with a Highland Park School District staff member pertaining to the proper use of the

network.) The system administrators will deem what is inappropriate use and their decision is final. Also, the system administrators may close an account at any time as required. The administration, faculty, and staff of Highland Park School District may request the system administrator to deny, revoke, or suspend specific user accounts.

3) **Network Etiquette** - You are expected to abide by the generally accepted rules of network etiquette. These include (but are not limited to) the following:
a) Be polite. Do not get abusive in your messages to others.

b) Use appropriate language. Do not swear, use vulgarities or any other inappropriate language.
c) Illegal activities are strictly forbidden.
d) Do not reveal your personal address or phone numbers of students or colleagues.
e) Note that electronic mail (e-mail) is not guaranteed to be private. People who operate the system do have access to all mail. Messages relating to or in support of illegal activities may be reported to the authorities.
f) Do not use the network in such a way that you would disrupt the use of the network by other users.
g) All communications and information accessible via the network should be assumed to be private properly.

4) Highland Park School District makes no warranties of any kind, whether expressed or implied, for the service it is providing. Highland Park School District will not be responsible for any damages you suffer. This include loss of data resulting from delays, nondeliveries, mis-deliveries, or service interruptions caused by it's own negligence or your errors or omissions. Use of any information obtained via the Internet is at your own risk. Highland Park School District specifically denies any responsibility for the accuracy or quality of information obtained through its services.

5) **Security** - Security on any computer system is a high priority, especially when the system involves many users. If you feel you can identify a security problem on the Internet, you must notify a system administrator or your Highland Park District Internet Coordinator. Do not demonstrate the problem to other users. Do not use another individual's account without written permission from that individual. Attempts to logon to the Internet as a system administrator will result in cancellation of user privileges. Any user identified as a security risk or having a history of problems with other computer systems may be denied access to Internet.

6) **Vandalism** - Vandalism will result in cancellation of privileges. Vandalism is defined as any malicious attempt to harm or destroy data of another user, Internet, or any of the above listed agencies or other networks that are connected to any of the Internet backbones. This includes, but not limited to, the uploading or creation of computer viruses.

School District Internet Use Agreement

I understand and will abide by the above Internet Use Agreement. I further understand that any violation of the regulations above is un ethical and may constitute a criminal offense. Should I commit any violation, my access privileges may be revoked, school disciplinary action may be taken, and/or appropriate legal action.

User's Full Name: _____

User Signature: _____

Date: _____

PARENT OR GUARDIAN

As the parent or guardian of this student, I have read the Internet Use Agreement. I understand that this access is designed for educational purposes. Highland Park School District has taken precautions to eliminate controversial material. However, I also recognize it is impossible for School District to restrict access to all controversial materials and I will not hold them responsible for materials acquired on the network. Further, I accept full responsibility for supervision if and when my child's use is not in a school setting. I hereby give permission to issue an account for my child and certify that the information contained on this form is correct.

Parent or Guardian's Name (please print): _____

Parent or Guardian's Signature: _____

SPONSORING TEACHER

(Must be signed if the applicant is a student)

I have read the Internet Use Agreement and agree to promote THIS agreement with the student. Because the student may use the network for individual work or in the context of another class, I cannot be held responsible for the student use of the network. As the sponsoring teacher I do agree to instruct the student on acceptable use of the network and proper network etiquette.

Teacher's Name (please print): _____

Teacher's Signature: _____

(1) location of the school:

(2) Names of Schools and Billed Entity Numbers

Entity Number: 54861

Entity Name: HIGHLAND PARK COMMUNITY HIGH SCHOOL

NCES District Number: 18330

Primary Street: 15900 WOODWARD AVE

Primary City: HIGHLAND PARK

Primary State: MI

Primary Zip: 48203

Entity Category: SCHOOL

SLD Entity Type:

Entity Number: 203342

Entity Name: HIGHLAND PARK ALTERNATIVE HIGH SCHOOL

NCES District Number: 18330

Primary Street: GLENDALE AT SECOND

Primary City: HIGHLAND PARK

Primary State: MI

Primary Zip: 48203

Entity Category: SCHOOL

SLD Entity Type:

Entity Number: 205228

Entity Name: HIGHLAND PARK CAREER ACADEMY

NCES District Number: 18330

Primary Street: GLENDALE & 2ND AVENUE

Primary City: HIGHLAND PARK

Primary State: MI

Primary Zip: 48203

Entity Category: SCHOOL

SLD Entity Type:

Entity Number: 54862

Entity Name: HIGHLAND PARK COMMUNITY JR HIGH SCH

NCES District Number: 18330

Primary Street: 15900 WOODWARD AVE

Primary City: HIGHLAND PARK

Primary State: MI

Primary Zip: 48203

Entity Category: SCHOOL

SLD Entity Type:

(3) Description of the school district:

Highland Park City School District is a public school district in Michigan that serves a low income urban population.

4) Program curriculum objectives:

- Curriculum objective is credit recovery and High School Completion

From Dropout to Stand-Out

How Highland Park Career Academy improved
student achievement for graduation with e2020

- Studentsserved Current 250 with planned expansion to 1,000+Curriculum

Introduction

The Education2020 (e2020) online learning program provides computer assisted learning systems, virtual classrooms, virtual laboratories, electronic field trips, e-mail, virtual tutoring, an online help desk, group chat sessions and non-computer-based activities facilitated by certificated teachers.

Despite 100% of students being classified as both low SES and at-risk, over 79% graduated from Highland Park Career Academy within the 2008-2009 school year-- nearly a 34% increase over and above the Detroit Public Schools graduation rate.

Since 1998, e2020 has successfully deployed online classroom programs in various settings to a wide range of middle and high school students representing various academic levels Over one thousand schools throughout the United States utilize e2020 for a variety of purposes including core curriculum for middle and high school education, credit recovery, academic learning centers, grade recovery programs, fast track middle school programs, district virtual schools, and various alternative school models.

For the significant number of schools that have utilized e2020 as the core curriculum, those schools have solidly outperformed other traditional schools.

At the time of this study, e2020 was servicing more than 70,000 students in 39 states. Participating students range in skill from special education to fast track students who, in some cases, have obtained perfect scores on the SAT and ACT tests. Education2020 students consistently show increased academic gains when the program is implemented with fidelity.

Research Goal

The primary goal of this research is to compare the graduation rates of the Highland Park Career Academy to that of the Detroit Public School (DPS) system. This study will provide empirical evidence of improved student academic performance for those who had previously dropped out of DPS, but have now completed course credit and graduated from high school using the e2020 Virtual Classroom product. Further, quantitative research will be conducted and explanations will be postulated as to why some students did not graduate on time.

Of the students that had previously dropped out of Detroit Public Schools, 76% graduated from Highland Park Career Academy using e2020.

Educational Setting and Participants

The Highland Park school system is located six miles north of Detroit and includes two K-8 and one K-5 elementary schools, one 9-12 high school, and one adult education/career academy. Highland Park is a regional leader under the School of Choice provision serving 2,704 K-12 students, 1,400 students at Highland Park Career Academy (for 16-19 year olds), and 516 students in adult education. Students enrolled in Highland Park schools represent residents throughout Wayne County, Michigan.

The e2020 program began in the summer of 2002 as a pilot study for the Warren Consolidated School District. Based on the program's success, the Highland Park school system implemented e2020 into their own pilot program for 107 students seeking to recover course credits through the Highland Park Career Academy (HPCA). The HPCA used the e2020 Virtual Classroom to aid students in recovering course credits. These students also attended traditional classrooms to complete additional coursework.

The more time a student spent in the Virtual Classroom, the better chance they had at passing the class and thus graduating on time.

Participants in this paper were from a sample of 107 high school seniors and adult learners who were enrolled in a total of 510 courses during the spring and summer of 2009 at the Highland Park Career Academy. Students were signed up simultaneously to one or more of these courses consisting of 50 mathematics classes, 61 science courses, 201 literature classes, 70 social studies courses, and 128 elective courses (see Table 2 pg. 7 for a full list).

Students who had higher relative grades across all subject areas were more likely to graduate on time than students who had lower relative grades.

This research is somewhat unique due to the homogeneity of this sample of students. One hundred six of the 107 participants are African American and all students are of lower socioeconomic status (SES) as indicated by the school lunch program. A breakdown of this sample is displayed in Figure 1.

A simple observation of the histogram proportions below suggests a difference between ratios of: students classified as high school seniors or adult learners (grade), male or female (gender), and whether or not participants had previously dropped out of Detroit Public Schools (dropout from DPS); but do these differences in proportions suggest consequent differences in e2020 grades? A series of independent sample *t*-tests were conducted to assess differences among the e2020 relative grades for all three of these comparisons. Relative percent grades are calculated by the percent grade of completed activities in e2020, factoring in zeroes for all work that has not completed. This is considered to be the most rigorous of the three measures embedded within the e2020 program.
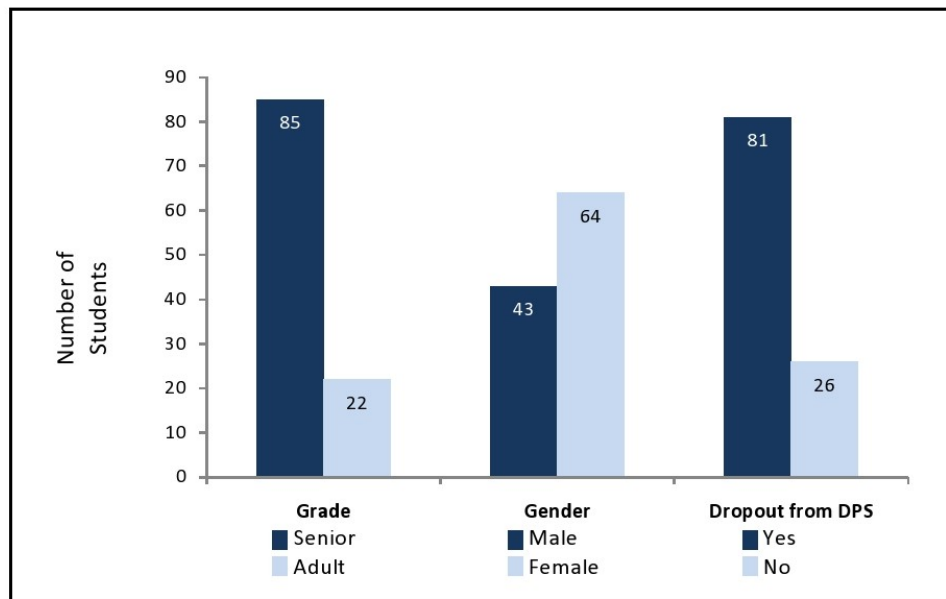
Figure 1. The number of students in the sample by grade, gender, dropout status from Detroit Public Schools.

The results of all three tests were not significant. On average, high school seniors (*M* = 65.03, *SD* = 25.04) had similar grades as compared to participants that were classified as adult learners (*M* = 64.57, *SD* = 26.12), *t* (480) = .149, *p* > .05. Similarly, male participants (*M* = 67.25, *SD* = 23.62) had comparable relative grades in relation to female participants (*M* = 62.96, *SD* = 26.36), *t* (479.51) = 1.88, *p* > .05[1]. Finally, the students within the sample that were classified as former dropouts (*M* = 56.11, *SD* = 32.17) from the Detroit Public School (DPS) system had statistically similar grades to students that did not previously drop out of the DPS system (*M* = 62.33, *SD* = 29.78), *t* (198.62) = 1.91, *p* > .05[1]. Although there was a high rate of former dropouts, low SES, and adult learners indicating a large percentage of at-risk students as classified by Michigan's Department of Education, none of these variables seemed to make a difference in e2020 relative grades.

Results

According to the Detroit Public Schools district profile report[2], approximately 59% of African American students graduated from the district within the 2008-2009 school year. Further, nearly 54% of students within the district that were classified as low SES graduated on time. In order to test a comparison of our sample to that of the DPS, we counted the number of

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[1] The Levene's test for equal variances was violated, thus the correction was reported.

[2] Detroit Public Schools website: http://www.detroitk12.org.nyud.net/schools/reports/pdfs/district_profile.pdf

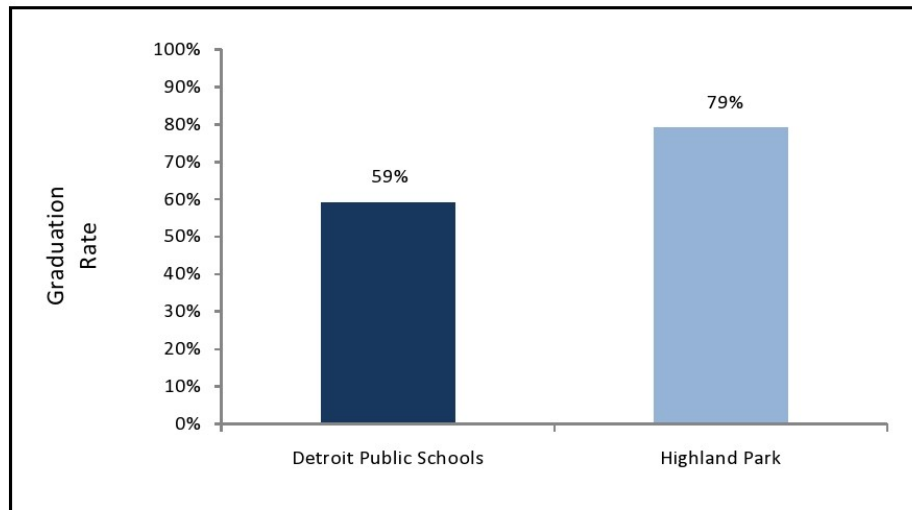students that did and did not graduate and then converted them to percent values to normalize across groups.

Figure 2. Rates of graduation of DPS students as compared to Highland Park students.

Despite 100% of students being classified as both low SES *and* at-risk, over 79% graduated from Highland Park using e2020. This is nearly a 34% increase over and above the district's graduation rate. Of the students that had previously dropped out from the DPS system, 76% (62 of 81 students) graduated from Highland Park using e2020 core courses.

A further analysis of these rates yields more compelling empirical data. An independent samples *t*-test was conducted to evaluate the hypothesis that courses taken by students who graduated on time tended to have higher relative percent grades in e2020 as opposed to courses taken by students who did not graduate on time. The test was significant, $t(508) = 10.788$, $p < .01$, $\eta^2 = .19$, courses taken by students who graduated on time ($M = 67.77$, $SD = 23.26$) had higher relative grades, on average, than courses taken by students who did not graduate on time ($M = 37.59$, $SD = 33.22$).

Despite these promising results, 23 of the original 107 students did not succeed in graduating on time[3]. Numerous possibilities exist that might have contributed to this event, but with the flexibility of the e2020 data system, we were able to confine these confounding variables to a minimal number of possibilities. In order to establish the relationship between e2020's calculation of relative percent grades and conditions students must meet in order to graduate, correlation coefficients were computed among the idle time and active time variables. Active time is the amount of time students spent progressing in their classes by watching videos,

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[3] Note: all 23 of these students are still enrolled in Highland Park Career Academy completing their e2020 courses for the 2009-2010 school year.

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exploring interactive activities, journaling, working on homework within the Virtual Classroom, or taking quizzes and exams. Idle time represents the amount of time students are not actively progressing in their courses. Idle time includes the time students use to review and reflect on past work or reviewing reports, as well as the time they spent logged into the e2020 system and not progressing.

Correlation coefficients were computed among the four perceived relevant variables: graduation rate, relative percent grade, active time, and idle time. One of the most rigorous methods to control for Type I error is the Bonferroni approach[4], thus a p-value of less than .008 (.05/6) was required for significance[5]. The results were statistically significant (r = 0.43, p < .008), relative grade (M = 61.50, SD = 28.39) was able to predict graduation rate (M = 0.79, SD = 0.41). Thus, 18.5% of the variance in graduation rate was accounted for by the variance in relative grades. In general, the results suggest that students who had higher relative grades across all subject areas were more likely to graduate on time than students who had lower relative grades.

	Relative Grades	Active Time	Idle Time
Graduation Rate	.432*	.189*	.207*
Relative Grades	__	.228*	.270*
Active Time		__	.455*

Note: * The mean difference is significant at the .008 level.

Table 1. *Pearson's Product Moment (Zero Order) Correlations.*

A correlation coefficient was computed among the relative grade percent and active time in minutes. Using the Bonferroni approach to control Type I error, a p-value of less than .008 (.05/6) was required for significance. The results were statistically significant (r = 0.23, p < .008), active time (M = 1757.28, SD = 1470.15) was able to predict relative grade (M = 61.50, SD = 28.39). Further, a correlation coefficient was computed among the relative grade percent and idle time in minutes. Again, the results were significant (r = 0.27, p < .008), idle time (M = 4436.82, SD = 28.6578) was able to predict relative grade.

Because, the variance in active time accounted for 5.2% of the variance in relative grades, and the variance in idle time accounted for 7.3% of the variance in relative grades, it can be hypothesized that the overall time spent within the Virtual Classroom may be one of the

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[4] Olejnik,S., Li, J., Supattathum, S., and Huberty, C.J. (1997). Multiple testing and statistical power with modified Bonferroni procedures. Journal of educational and behavioral statistics, 22, 389-406.

[5] We originally piared six-zero order correlations between graduation and relative grade, including active time and idle time.

primary contributors to students' relative grades in Virtual Schools. As a follow up, an independent samples *t*-test was conducted to evaluate whether total time (active time + idle time) was larger or smaller depending on whether students had graduated or not. The results indicated that the mean total time in minutes for students that graduated (*M* = 6639.66, *SD* = 3858.94) was significantly greater than the total time in minutes for students that did not graduate (*M* = 4495.96, *SD* = 28.35), *t*(218.39) = 6.39, *p* < .01[6]. The 95% confidence interval for the mean difference between the two ratings was 1481.99 to 2805.40. The variable that accounted for the most variance in student grades was the total time (in minutes) spent in the Virtual Classroom. Thus, the more time a student spent in the Virtual Classroom, the better chance they had of passing the class and graduating on time.

Conclusion

At first glance, this sample of students from Highland Park Career Academy seems to embody all of the predictors of students who are at-risk of graduating. The classification of 100% of students being economically disadvantaged, 76% of the students dropping out of the Detroit Public Schools system, and 21% of their students continuing education as adults all seem to be a detriment to this school's educational goal. Despite these classifications and hurdles, 79% of students were able to graduate on time, 76% of which had previously dropped out of the DPS system. Of the 23 students that failed to graduate on time, total time (time spent engaged in e2020 content) was targeted as the primary predictor of student achievement within e2020 courses. Finally, Highland Park Career Academy, with the help of e2020's Virtual Classroom, was able to increase their graduation nearly 34% higher than the Detroit Public Schools system for a similar sampling of students. As the Highland Park Career Academy students become more active in e2020's Virtual Classroom, their grades and overall graduation rates will rise substantially.

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[6] The Levene's test for equal variances was violated, thus the correction was reported.

Row Labels	Count of Number	Row Labels	Count of Number
Electives	**128**	**Math**	**50**
CA Day - Computer Applications	9	(SL) - CA Day - Algebra	1
CA Day - Consumer Skills	2	(SL) - CA Day - Geometry	1
CA Day - Consumer Skills	42	Algebra I - MA1101	1
CA Day - Health	30	CA Day - Algebra	16
CA Day - Psychology	11	CA Day - Geometry	23
CA Day - Sociology	11	Geometry - MA1102	2
Computer Applications - EL1083	1	HPCA Algebra II (1st Quarter)	1
HPCA Career Skills	3	HPCA Geometry 1	2
HPCA Computer Applications	2	HPCA Geometry 2	3
HPCA Consumer Skills	5	**Science**	**61**
HPCA Consumer Skills 2	1	CA Day - Biology	9
HPCA Health 1	1	CA Day - Chemistry	16
HPCA Health 2	2	CA Day - Earth Science	13
HPCA Psychology 1	2	CA Day - Earth Science	20
HPCA Psychology 2	1	HPCA Chemistry 2	1
HPCA Sociology	2	HPCA Earth Science 1	2
Sample Psych	2	**Language Arts**	**201**
Psychology - EL1119	1	(SL) - CA Day Language Arts 11 (Amer Lit)	1
Social Studies	**70**	CA Day - English 10	17
CA Day - Economics	5	CA Day - English 9	4
CA Day - Government	5	CA Day - Language Arts 11 (Amer Lit)	19
CA Day - World History	28	CA Day - Language Arts 12 (British Lit)	37
CAD US History - SS1109	10	CLN - A Midsummer Night's Dream LA805	26
Economics - SS1111	1	CLN - Call of the Wild - LA789	28
HPCA Economics	1	CLN - Nineteen Eighty-four - LA791	24
HPCA Geography 1	2	CLN - The Three Musketeers - LA815	27
HPCA US History 1	5	HPCA English 1	2
HPCA US History 2	4	HPCA English 3	3
HPCA World History 1	5	HPCA English 4	2
MS World History - SS1105	1	HPCA English 6	3
World History - SS1108	2	HPCA English 7	4
World History 1 - HP Summer	1	HPCA English 8	2
		Language Arts 12 - LA1094	1
		Sample English Course	1

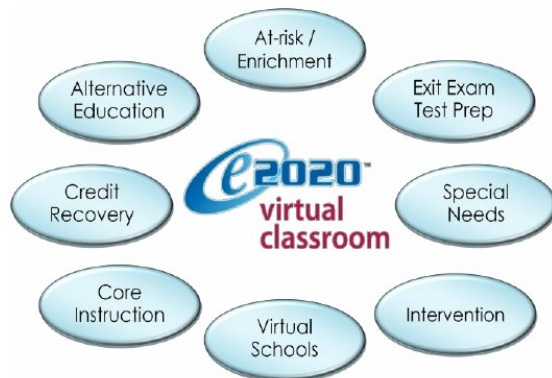Table 2. *The Number of Subjects Parceled out by Specific Course.*

About e2020's Virtual Classroom Suite

The e2020 Virtual Classroom provides over 50 core and elective courses. Each course offers customized instruction for an individualized approach in which educators can set mastery levels, customize settings and offer a prescriptive study plan.

The e2020 course structure

The e2020 Educational Model for Learning embeds the principles of Universal Design for Learning (UDL)[7] in its foundational framework. e2020's team of instructional designers, content area experts, and highly qualified teachers prepares for and constructs unique course scopes and sequences. By layering UDL principles and Quality Standards for Online Courses with the Southern Regional Education Board (SREB)[8], e2020 has aligned all course content to each state's curriculum standards. e2020 designs each lesson with student-centered objectives that maximize the use of Bloom's Taxonomy of Learning Domains. Lessons are designed to provide students with an optimal learning experience unique to each course. Students progress through the lesson with a series of activities including: direct instruction videos taught by certified teachers; vocabulary instruction; interactive lab simulations; journals and essay writing; 21st century skill activities that include projects, design proposals, case studies, online content reading; and homework/practice preceding formative assessments. Topic tests and cumulative exam reviews are administered to reinforce content mastery prior to students' taking summative assessments.

For related evidence-based research surrounding the e2020 Educational Model, visit www.education2020.com/Evidence.

e2020's Targeted Solutions

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[7] http://www.education.ky.gov/KDE/Instructional%20Resources/Curriculum%20Documents%20and%20Resources/Universal%20Design%20for%20Learning/

[8] http://www.sreb.org/